

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A semiconductor light-receiving device comprising:

a semiconductor substrate having a first surface on a light-receiving side and a second surface on the opposite side to said first surface, said semiconductor substrate comprising a first conductivity type;

a semiconductor layer formed on said first surface of said semiconductor substrate;

a plurality of first semiconductor regions formed in said semiconductor layer so as to reach said semiconductor substrate from a surface of said semiconductor layer, said plurality of first semiconductor regions being formed apart from each other, and comprising the first conductivity type;

a second semiconductor region selectively formed in a surface region of said semiconductor layer, said second semiconductor region having a lattice form or a network form to surround each of said plurality of first semiconductor regions with surface portions of said semiconductor layer therebetween and comprising a second conductivity type;

a first electrode formed on said second semiconductor region and having a lattice form or a network form;

a second electrode formed on said second surface of said semiconductor substrate;

said surface portions of said semiconductor layer between each of said plurality of first semiconductor regions and said second semiconductor region having higher resistances than resistances of said plurality of first semiconductor regions and said second semiconductor region; and

depletion regions predominantly spreading in directions along the surface of said semiconductor layer between said second semiconductor region and each of said plurality of first semiconductor regions configured to deplete said surface portions of said semiconductor

layer completely in a state in which a reverse bias is applied between said first electrode and said second electrode,

wherein said surface portions of said semiconductor layer receive incident light predominantly in the surface of said semiconductor layer.

Claims 2 and 3 (Canceled).

Claim 4 (Previously Presented): The semiconductor light-receiving device according to Claim 1, wherein said first electrode is formed on part of said second semiconductor region.

Claim 5 (Previously Presented): The semiconductor light-receiving device according to Claim 1, wherein each of said plurality of first semiconductor regions has an island form or a stripe form.

Claim 6 (Canceled).

Claim 7 (Currently Amended): A semiconductor light-receiving device comprising:  
a semiconductor substrate having a first surface on a light-receiving side and a second surface on the opposite side to said first surface, said semiconductor substrate comprising a first conductivity type;

a semiconductor layer formed on said first surface of said semiconductor substrate;

a plurality of first semiconductor regions formed in said semiconductor layer so as to reach said semiconductor substrate from a surface of said semiconductor layer, said plurality

of first semiconductor regions being formed apart from each other, and comprising the first conductivity type;

a second semiconductor region selectively formed in a surface region of said semiconductor layer and having a plurality of openings, each of said plurality of first semiconductor regions being provided within each of said plurality of openings of said second semiconductor region respectively with surface portions of said semiconductor layer therebetween and comprising a second conductivity type;

a first electrode formed on said second semiconductor region and having a lattice form or a network form;

a second electrode formed on said second surface of said semiconductor substrate;

said surface portions of said semiconductor layer between each of said plurality of first semiconductor regions and said second semiconductor region having higher resistances than resistances of said plurality of first semiconductor regions and said second semiconductor region; and

depletion regions predominantly spreading in directions along the surface of semiconductor layer between said second semiconductor region and each of said plurality of first semiconductor regions configured to deplete said surface portions of said semiconductor layer completely in a state in which a reverse bias is applied between said first electrode and said second electrode;

wherein said surface portions of said semiconductor layer receive incident light predominantly in the surface of said semiconductor layer.

Claim 8 (Canceled).

Claim 9 (Previously Presented): The semiconductor light-receiving device according to Claim 7, wherein said first electrode is formed on part of said second semiconductor region.

Claim 10 (Previously Presented): The semiconductor light-receiving device according to Claim 7, wherein each of said plurality of first semiconductor regions has an island form or a stripe form.

Claim 11 (Canceled).

Claim 12 (Previously Presented): A semiconductor light-receiving device comprising:  
a semiconductor substrate having a first surface on a light-receiving side and a second surface on the opposite side to said first surface, said first surface including a plurality of protruded surface portions separated from each other, and said semiconductor substrate comprising a first conductivity type;

a semiconductor layer selectively formed on said first surface of said semiconductor substrate, said semiconductor layer having a higher resistance than a resistance of said semiconductor substrate and having a plurality of openings, each of said plurality of protruded surface portions of said first surface being positioned within each of said plurality of openings of said semiconductor layer respectively;

a semiconductor region selectively formed in a surface region of said semiconductor layer and having a lattice form or a network form to surround each of said plurality of protruded surface portions of said first surface with surface portions of said semiconductor layer therebetween, said semiconductor region comprising a second conductivity type;

a first electrode formed on said semiconductor region and having a lattice form or a network form;

a second electrode formed on said second surface of said semiconductor substrate;  
and

depletion regions predominantly spreading in directions along the surface of said semiconductor layer between said second region and each of said plurality of protruded surface portions of said semiconductor substrate configured to deplete said surface portions of said semiconductor layer completely in a state in which a reverse bias is applied between said first electrode and said second electrode,

wherein said surface portions of said semiconductor layer receive incident light predominantly in the surface of said semiconductor layer.

Claims 13 and 14 (Canceled).

Claim 15 (Previously Presented): The semiconductor light-receiving device according to Claim 12, wherein said first electrode is formed on part of said semiconductor region.

Claim 16 (Previously Presented): The semiconductor light-receiving device according to Claim 12, wherein each of said plurality of protruded surface portions of said semiconductor substrate has an island form or a stripe form.

Claim 17 (Canceled).

Claim 18 (Previously Presented): A semiconductor light-receiving device comprising:

a semiconductor substrate having a first surface on a light-receiving side and a second surface on the opposite side to said first surface, said first surface including a plurality of protruded surface portions separated from each other, and said semiconductor substrate comprising a first conductivity type;

a semiconductor layer selectively formed on said first surface of said semiconductor substrate, said semiconductor layer having a higher resistance than a resistance of said semiconductor substrate and having a plurality of openings, each of said plurality of protruded surface portions of said first surface being positioned within each of said plurality of openings of said semiconductor layer respectively;

a semiconductor region selectively formed in a surface region of said semiconductor layer and having a plurality of openings, each of said plurality of protruded surface portions of said first surface being provided within each of said plurality of openings of said semiconductor region respectively with surface portions of said semiconductor layer therebetween, and said semiconductor region comprising a second conductivity type;

a first electrode formed on said semiconductor region and having a lattice form or a network form;

a second electrode formed on said second surface of said semiconductor substrate;  
and

depletion regions predominantly spreading in directions along the surface of said semiconductor layer between said semiconductor said semiconductor region and each of said plurality of protruded surface portions of said semiconductor substrate configured to deplete said surface portions of said semiconductor layer completely in a state in which a reverse bias is applied between said first electrode and said second electrode,

wherein said surface portions of said semiconductor layer receive incident light predominantly in the surface of said semiconductor layer.

Claim 19 (Canceled).

Claim 20 (Previously Presented): The semiconductor light-receiving device according to claim 18, wherein said first electrode is formed on part of said semiconductor region.

Claim 21 (Previously Presented): The semiconductor light-receiving device according to claim 18, wherein each of said plurality of protruded surface portions of said semiconductor substrate has an island form or a stripe form.

Claim 22 (Canceled).